

**Exercise 1a.** Write the following set using the Roster Method.

$\{x \in \mathbb{N}: -2 < x \leq 7\} =$  put your answer in here ...between the parentheses ... do not forget the \$ signs

**Exercise 1b.** Write the following set using the Roster Method.

$\{x \in \mathbb{Z}: |2x| < 5\} =$  put your answer in here ...between the parentheses

**Exercise 1c.** Recall proper set builder notation defines the set by stating a rule, denoted  $P(x)$ , that all elements  $x$  in the set must satisfy and is of the form  $\{x \in U: P(x)\}$  where  $U$  is the universe. Write the following set using the proper set builder notation using  $\mathbb{R}$  as the universe.

$\{3, 6, 9, 12, 15, 18, 21, \dots\} =$  put your answer in here ...between the parentheses

**Exercise 1d.**  $\text{card}(\{x \in \mathbb{Z}: x^2 < 25\}) =$  put your answer in here ...between the parentheses

**Exercise 1e.** If the following expression does not make sense, then say it does not make sense and indicate why. If the following expression makes sense, then say it makes sense and indicate whether it is True or False.

$\{2\} \in \{x \in \mathbb{R}: x^2 < 17\}$

*Write your answer here.*